WHAT IS CLAIMED IS:

1. Transparent gas barrier packaging laminate having a required bending stiffness, comprising outside layers of heat-sealable olefin polymer, a first gas barrier layer of SiOx, coated onto a first polymer carrier layer and a second gas barrier layer of SiOx, coated onto a second polymer carrier layer, wherein an intermediate polymer layer of high stiffness and higher thickness relative to each of the surrounding layers is laminated between the two gas barrier coated carrier layers, such that the inherent stiffness of each of the carrier layers interact with the inherent stiffness as well as the higher thickness of the intermediate polymer layer by a so-called I-beam or sandwich effect in order to provide the required bending stiffness, thus rendering the packaging laminate suitable for packaging of liquid foods and drinks by a high speed, continuous process.

2. Transparent gas barrier packaging laminate according to claim 1, wherein the thickness of the intermediate layer constitutes from 30 to 55%, preferably from 35 to 50%, of the total thickness of the packaging laminate.

3. Transparent gas barrier packaging laminate according to claim 1, wherein the thickness of one carrier layer constitutes from 5 to 20%, preferably from 5 to 15%, of the total thickness of the packaging laminate.

4. Transparent gas barrier packaging laminate according to claim 1, wherein the polymer carrier layer is a film of oriented polyester or polyamide.

5. Transparent gas barrier packaging laminate according to claim 4, wherein the oriented polymer carrier layer is a film of a polymer selected from

mono- or biaxially oriented polyethyleneterephtalate (PET), mono- or biaxially oriented polyethylenenaphtenate (PEN) and mono- or biaxially oriented polyamide (PA).

6. Transparent gas barrier packaging laminate according to claim 1, wherein the polymer of the intermediate layer is selected from high density polyethylene or polypropylene.

7. Transparent gas barrier packaging laminate according to claim 1, wherein the polymer of the intermediate layer is an olefine polymer and the polymer of the carrier layer is an oriented polyester or polyamide.

8. Transparent gas barrier packaging laminate according to claim 1, wherein the SiOx gas barrier layers are positioned in the laminate such that they are facing towards each other.

9. Transparent gas barrier packaging laminate according to claim 1, wherein the SiOx-layer is deposited by PECVD technique, wherein $x = 1.7$ to 2.0, at a thickness of 50 to 500 Å, preferably 80 to 300 Å.

10. Transparent gas barrier packaging laminate according to claim 1, wherein the thickness of the polymer carrier layer is from 7 to 30 μm, preferably from 8 to 20 μm, more preferably from 8 to 15 μm.

11. Transparent gas barrier packaging laminate according to claim 1, wherein the first polymer carrier layer and the second polymer carrier layer have the same thickness.

12. Transparent gas barrier packaging laminate according to claim 1, wherein the thickness of the intermediate layer is from 40 to 80 μm, more preferably from 40 to 60 μm, most preferably from 40 to 55 μm.

13. Transparent gas barrier packaging laminate according to claim 1, wherein the total thickness of the packaging laminate is from 100 to 180 μm, preferably from 110 to 140 μm.

14. Transparent gas barrier packaging laminate according to claim 1, wherein the thickness of the intermediate layer is from 40 to 60 μm, the thickness of the polymer carrier layer is from 8 to 15 μm, that the thickness of the outside layers of heat-sealable olefin polymer is from 10 to 25 μm and from 18 to 30 μm, respectively, and that the total thickness of the packaging laminate is from 110 to 140 μm.

15. Transparent gas barrier packaging laminate according to claim 1, wherein the thickness of the intermediate layer is from 40 to 50 μm, the thickness of the polymer carrier layer is from 12 to 15 μm and that the thickness of the outside layers of heat-sealable olefin polymer is from 10 to 25 μm and from 18 to 30 μm, respectively, and that the total thickness of the packaging laminate is from 110 to 140 μm.

16. Transparent gas barrier packaging laminate according to claim 1, wherein the thickness of the intermediate layer is from 50 to 60 μm, the thickness of the polymer carrier layer is from 8 to 12 μm and that the thickness of the outside layers of heat-sealable olefin polymer) is from 10 to 25 μm and from 18 to

30 μm, respectively, and that the total thickness of the packaging laminate is from 110 to 140 μm.

17. Transparent gas barrier packaging laminate according to claim 1, wherein the intermediate polymer layer is laminated to the adjacent layers of SiOx by means of a binder layer.

18. Transparent gas barrier packaging laminate according to claim 17, wherein the binder layer comprises a graft copolymer of alkoxysilane and polyethylene.

19. Packaging container manufactured from a packaging material comprising a packaging laminate according to claim 1.

20. Method of manufacturing of a packaging laminate, comprising the steps of:

advancing a first web comprising a first polymer carrier layer, coated with a first SiOx gas barrier layer, and a second web comprising a second polymer carrier layer, coated with a second SiOx gas barrier layer, towards each other and towards an extrusion station;

laminating the two webs to each other by means of extruding an intermediate polymer layer, optionally together with a binder layer on each side of the intermediate polymer layer, between the two webs arid pressing them together at the extrusion station;

extruding a first outside layer comprising a heat-sealable polyolefin onto the outside of the first or second polymer carrier layer at an extrusion station; and

extruding a second opposite outside layer comprising a heat-sealable polyolefin onto the outside of the other of the second or first polymer carrier layer at an extrusion station.

21. Method according to claim 20, wherein the first and second webs comprising a polymer carrier layer coated with SiOx gas barrier layers are advanced towards each other such that the SiOx gas barrier layers are facing each other.

22. Method according to claim 20, wherein the SiOx-layers are treated by a surface activation treatment before laminating to the adjacent layers, preferably corona treatment.

23. Method of manufacturing of a packaging laminate, comprising the steps of:

advancing a first web comprising a first polymer carrier layer coated with a first SiOx gas barrier layer and a second web comprising a second polymer carrier layer coated with a second SiOx gas barrier layer towards each other and towards an extrusion station;

laminating the two webs to each other by means of extruding an intermediate polymer layer, optionally together with a binder layer on each side of the intermediate polymer layer, between the two webs and pressing them together at the extrusion station;

laminating by application of heat and pressure a premanufactured film comprising at least one layer of a heat-sealable polyolefin to the outside of the first or second polymer carrier layer at a hot roller nip; and

laminating by application of heat and pressure a premanufactured film comprising at least one layer of a heat-sealable polyolefin to the outside of the other of the second or first polymer carrier layer at a hot roller nip.

24. Method according to claim 23, wherein the first and second webs comprising a polymer carrier layer coated with SiOx gas barrier layers are advanced towards each other such that the SiOx gas barrier layers are facing each other.

25. Method according to claim 23, wherein the SiOx-layers are treated by a surface activation treatment before laminating to the adjacent layers, preferably corona treatment.

26. Method of manufacturing of a packaging laminate, comprising the steps of:

advancing a first web comprising a first polymer carrier layer coated with a first SiOx gas barrier layer and a second web comprising a second polymer carrier layer, coated with a second SiOx gas barrier layer towards each other and towards a hot roller nip;

laminating the two webs to an intermediate pre-manufactured web comprising an intermediate polymer layer and, optionally, a binder layer on each side of the intermediate polymer layer, which is advanced between the first and second webs, and applying heat and pressure in the hot roller nip;

laminating by application of heat and pressure a premanufactured film comprising at least one layer of a heat-sealable polyolefin to the outside of the first or second polymer carrier layer at a hot roller nip; and

laminating by application of heat and pressure a premanufactured film comprising at least one layer of a heat-sealable polyolefin to the outside of the other of the second or first polymer carrier layer at a hot roller nip.

27. Method according to claim 26, wherein the first and second webs comprising a polymer carrier layer coated with SiOx gas barrier layers are advanced towards each other such that the SiOx gas barrier layers are facing each other.

28. Method according to claim 26, wherein the SiOx-layers are treated by a surface activation treatment before laminating to the adjacent layers, preferably corona treatment.